REMARKS

Favorable reconsideration of this application as presented amended and in light of the following discussions is respectfully requested.

Claims 11-18 are presently active in this case. The present amendment cancels Claims 1-10 without prejudice or disclaimer, and adds new Claims 10-18 without introducing any new matter.

In the outstanding Office Action, the Abstract of the Disclosure was objected to for informalities. Claims 7 and 8 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite; Claims 7, 8 and 10 were rejected under 35 U.S.C. § 102(e) as being anticipated by Castagnozzi et al. (U.S. Patent No. US 7,024,599, hereinafter "Castagnozzi").

In response to the Restriction Requirement being made final, Claims 1-6 and 9, directed to non-elected inventions, are canceled. Applicants reserve the right to present claims directed to the non-elected inventions in a divisional application, which shall be subject to the third sentence of 35 U.S.C. § 121.[1]

In response to the objections to the Abstract, the Abstract is rewritten to correct the noted informalities. In light of their formal nature, the changes to the specification and Abstract do not raise a question of new matter.

In response to the rejection of Claims 7-8 under 35 U.S.C. § 112, second paragraph, to better comply with U.S. claim drafting practice, and to correct minor formalities, Claims 7-8 and 10 are rewritten as new claims. No new matter has been added.

In particular, the features of Claim 7 are now recited in independent Claim 11. In addition, new Claim 11 further recites features related to a "a second decider for transforming the electronic signals into a second binary signal," and "combiner means for combining the

[1] "A patent issuing on an application with respect to which a requirement for restriction under this section has been made ... shall not be used as a reference ... against a divisional application." See also MPEP 804.01.

identification signals and the second binary signal to combined identification signals." These features find non-limiting support in Applicants' specification as originally filed, for example with relationship to Embodiment 4 as shown in a non-limiting example in Fig. 12, ("Sweep Identification Device") and in the specification starting at p. 18, l. 20. The embodiment shown in Fig. 12 serves for exemplary purposes only, and is not intended to limit the scope of protection of the claims.

In response to the rejection of Claims 7-8 and 10 under 35 U.S.C. §102(e), Applicants respectfully request reconsideration of this rejection and traverses the rejection, as discussed next.

Briefly summarizing, Applicants' Claim 11 relates to an optical signal receiving equipment. The equipment includes, *inter alia*: a plurality of first deciders for transforming the electronic signals into a plurality of first binary signals; ***a second decider*** for transforming the electronic signals into a second binary signal; decision encoding means for computing identification signals based on the plurality of first binary signals, and for computing reliability information indicating a level of reliability of the computed identification signals; ***combiner means for combining the identification signals and the second binary signal to combined identification signals***.

Turning now to the applied reference, Castagnozzi describes a method for channel equalization in communication systems. (Castagnozzi, Abstract, ll. 1-3.) Castagnozzi uses a multi-threshold circuit 102 that generates signals from an input signal that are processed by a non-causal circuit 110. (Castagnozzi, col. 3, ll. 38-52, Fig. 2.) The non-causal circuit 110 is a filter that performs estimations of the values from the multi-threshold circuit. (Castagnozzi, col. 3, l. 53 to col. 4, l. 4, Fig. 3.) Subsequently, a forward-error-correction (FEC) circuit 130 calculates new threshold values for the multi-threshold circuit 102 based on the error correction. (Castagnozzi, col. 4, ll. 28-39, Fig. 4.) Castagnozzi also explains that an

averaging circuit can be used to generate long-term averages to determine the threshold settings of the multi-threshold circuit 102, instead of the FEC circuit. (Castagnozzi, col. 5, ll. 56-66, Fig. 6.)

However, the cited passages of Castagnozzi fails to teach the Claim 11 features related to the second decider for transforming the electronic signals into a second binary signal, and a combiner means for combining the identification signals and the second binary signal to combined identification signals. In Castagnozzi, all the binarized signals 108a, 108b, and 108c are feed-forwarded to the non-causal circuit 110. (Castagnozzi, Figs. 3 and 6, col. 4, ll. 5-27.) There is no second decider that transforms a signal into a second binary signal, that is combined with the identification signals ***and*** the second binary signal.

Therefore, the cited passages of Castagnozzi fail to teach every feature recited in Applicants' independent Claim 11, so that Claim 11 is believed to be patentably distinct over Castagnozzi. Accordingly, Applicants respectfully traverse, and request reconsideration of, the rejection based on Castagnozzi.[2]

Independent Claims 16 and 17 recite similar or somewhat similar features as independent Claim 11, but in device claim language (Claim 16) and method claim language (Claim 17.) Therefore Applicants respectfully submit that Claims 16-17 are also believed to be allowable in view of the arguments regarding independent Claim 11.

Independent Claim 18 recites, among other features that are patentably distinct over Castagnozzi, "a fixed-threshold decider configured to execute hard-decision identification of the electronic signals, independently from the soft decision-identification means and the plurality of variable-threshold deciders." Since in Castagnozzi all the comparators 124, 128, and 126, etc. have variable thresholds that are set by the FEC circuit 130, Castagnozzi fails to

[2] See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

teach all the features of Claim 18. Therefore, Applicants' Claim 18 is also believed to be patentably distinct over the cited passages of Castagnozzi.

New Claim 12 depends from Claim 11 and recites "control means is further configured to control the a threshold level of the second decider, and to record an optimum threshold for the second decider." This feature finds non-limiting support in Applicants' specification from p. 19, l. 12, to p. 20, l. 12, and in corresponding Fig. 12. New Claim 13 depends from Claim 12 and recites "the optimum threshold for the second decider when the optical signal receiving equipment starts to operate," and finds non-limiting support in Applicants' specification at p. 20, ll. 13-22. New Claim 14 depends from Claim 11 and recites features regarding a communication quality detection means. This feature finds non-limiting support in Applicants' disclosure, for example at least in Figs. 1 and 12. New Claim 15 depends from Claim 14 and recites features related to the correction of threshold levels, and finds non-limiting support in Applicants' specification at p. 8, ll. 3-9.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 11-18 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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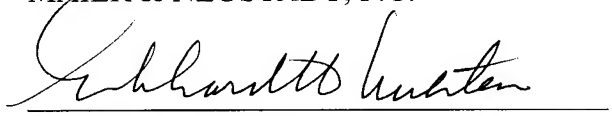

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